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EXAMINER	
JOHNSON III, HENRY M	
ART UNIT	PAPER NUMBER
3739	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/647,948	JAY, HARVEY	
	Examiner	Art Unit	
	Henry M. Johnson, III	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,12-19,22-29,31-40,58,59 and 67-91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,12-19,22-29,31-40,58,59 and 67-91* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *110705 080306*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Applicant's Information Disclosure filed on August 3, 2006 is acknowledged.

Applicant's arguments filed on January 26, 2006 with respect to claims have been considered but are moot in view of the new ground(s) of rejection. While the examiner believes the prior rejections were proper under the doctrine of inherency (Where a reference discloses the terms of the recited method steps, and such steps necessarily result in the desired and recited effect, that the reference does not describe the recited effect *in haec verba* is of no significance as the reference meets the claim under the doctrine of inherency. Ex parte Novitski, 26 USPQ2d 1389, 1390-91 (BdPatApp & Inter 1993).), a new reference to Chubb et al. provides specific methods for periodic radiation of tissue to produce vitamin D. Since the treatment does not involve a tissue treatment per se, any skin condition may be present at the exposure. This overcomes the applicant's primary argument that the prior art of the prior office action induced tissue damage (tanning). A determination of exposure is inherently done in the evaluation of vitamin D needs of an individual. The references to Eckhouse et al., Talpalriu et al., McDaniel and Eckhardt are combined with the Chubb et al. reference in the following rejections.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, 12-19, 22-28, 67, 82 and 84 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The condition of being "effectuated in the absence of any visible **undesirable condition**" in claim 1 is new matter. The condition of "prior to detecting any substantial visible change" in claim 1 is new matter, not provided in the original disclosure.

Claims 1-9, 12-19, 22-29, 31-40, 67-80 and 82-89 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosed and claimed methods cannot be easily replicated without undue experimentation. Specifically, applicant has not provided an enabling disclosure which would permit one to practice the invention to alt least "reduce damage" to the skin. The claim language leads one to believe that the damage already experienced is somehow reduced or reversed. Also, there is no evidence to support a reduction or prevention of damage. This conclusion is supported by the examiner's evaluation of the following factors.

According to MPEP § 2164.01(a), there are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

(A) The breadth of the claims; the application cites fluences from 0.01 to 200 J/cm^2 for the method. These differ by a factor of 10,000. More limited ranges are claimed, however, no unexpected results or benefits are attributed to the smaller ranges.

(B) The nature of the invention; the method results are based on speculation with no experimental evidence or prior art to validate any operational parameters.

(C) The state of the prior art; no prior art has been presented that suggests that radiation of tissue may prevent or reduce damage due to subsequent X-ray or ultraviolet radiation.

(D) The level of one of ordinary skill; a skilled artesian is aware of the impact of the parameters of the radiation (i.e. pulse width, intensity, pulse interval, etc) on the fluence delivered and that skin varies from individual to individual to react differently to radiation. This knowledge would inherently lead to experimentation to determine the best method based on tissue variables and radiation parameters.

(E) The level of predictability in the art; lacking prior art or clinical results, there is no perceived predictability.

(F) The amount of direction provided by the inventor; the inventor has presented multiple parameter scenarios for the method, however, no results from such parameters are provided.

(G) The existence of working examples; see (F).

(H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure. See (D).

The lack of working examples, coupled with the lack of predictability in the art are high level indicators of a non-enabled disclosure.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9, 12-19, 22-28, 67-69, 84 and 86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 68 recite the term "visible undesirable condition". This is indefinite, as it requires a subjective judgment, leading one to not be precisely aware of the metes and bounds of the patent protection desired. What may be desirable for one person, may be undesirable to another.

Claims 1, 68, 72, 73 and their dependent claims are indefinite due to cited result of reducing damage to skin implies the skin is damaged, yet the method requires no visible undesirable condition prior to treatment.

Claim 18 is indefinite as the meaning of "further removed in time" is not clear as written.

Claim 19 recites the limitation "said occasions" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

Claims 84-89 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The manner in which the antagonizing radiation was received has no impact on the action steps of the method claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 70-75, 87 and 88 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,017,360 to Chubb et al. Chubb et al. disclose methods of sunlight exposure to provide adequate vitamin D, the method including daily exposure to light between 0.02 and 0.2 minimal erythema dose (MED). Daily exposure clearly teaches applying electromagnetic radiation (EMR) and a predetermined time interval between exposures of about 24 hours and clearly provides intervals wherein the exposure is before during or after exposure to X-ray or UV radiation since a daily routine is ongoing. The MED's for full body exposure range from 30 to 381 mJ/cm^2 (Col. 17, lines 28-29), therefore the 0.2 MED fluences would be from 6 to 76 mJ/cm^2. The radiation may be UV and visible regions of the spectrum (Col. 16, lines 54-56). The light may be sunlight or artificial produced by fluorescent, incandescent (Col. 28, line 59) or quartz halogen devices (Col. 29, line 65). Fluorescent and quartz halogen lamps include wavelengths above 400 nanometers. The condition of the skin is irrelevant to Chubb et al., in that the level of vitamin D is the primary concern, thereby implying any skin condition may be exposed, including damaged or undamaged. Chubb et al. also disclose a meter to measure the exposure levels (Col. 26, lines 55-56). Where a reference discloses the terms of the recited method steps, and such steps necessarily result in the desired and recited effect, that the reference does not describe the recited effect *in haec verba* is of no significance as the reference meets the claim under the doctrine of inherency. Ex parte Novitski, 26 USPQ2d 1389, 1390-91 (BdPatApp & Inter 1993).

Regarding claim 71, no positive, active step is included.

Regarding claim 72, in the determination of a persons vitamin D levels, a determination of exposure to sunlight (contains both X-ray and UV) that produces the vitamin is inherent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, 12-19, 24, 29, 31-37, 40, 67-69, 78-80, 84-86 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,017,360 to Chubb et al. in view of U.S. Patent 6,514,243 to Eckhouse et al. Chubb et al. disclose methods of sunlight exposure to provide adequate vitamin D, the method including daily exposure to light between 0.02 and 0.2 minimal erythema dose (MED). Daily exposure provides a predetermined time interval between exposures of about 24 hours. The MED's for full body exposure range from 30 to 381 mJ/cm^2 (Col. 17, lines 28-29), therefore the 0.2 MED fluences would be from 6 to 76 mJ/cm^2. The radiation may be UV and visible regions of the spectrum (Col. 16, lines 54-56). The light may be sunlight or artificial produced by fluorescent, incandescent (Col. 28, line 59) or quartz halogen devices (Col. 29, line 65). Chubb et al. also disclose a meter to measure the exposure levels (Col. 26, lines 55-56). Chubb et al. do not disclose pulsed radiation. Pulsing radiation is a well known technique that allows fluence levels to be controlled by altering the radiation parameters. Eckhouse et al. teach a light source for providing light from 530 to 1300 nanometers and fluences from 10-100 J/cm^2, making the Eckhouse et al. source a good choice for the method of Chubb et al. The pulse widths are less than 200 ms with pulse intervals from 10 to 100 ms. All EMR inherently has parameters associated therewith.

It would have been obvious to one skilled in the art to use the device and pulse parameters as taught by Eckhouse et al. in the method of Chubb et al. to expose tissue to selected wavelengths of radiation as the device of Eckhouse et al. meets the light requirements as disclosed by Chubb et al. motivating Chubb et al. to look for such a source.

Regarding claim 6, the use of mini-pulses or pulse packets are not disclosed to yield specific benefits or unexpected results. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use any pulse schemes that deliver the required dosage because Applicant has not disclosed that such pulses provide an advantage, are used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected any pulse regiment that provides the dosage required to perform equally well as they all provide the radiation to the skin as required.

Therefore, it would have been prima facie obvious to modify Chubb et al. in view of Eckhouse et al. to obtain the invention as specified in claims because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Chubb et al. in view of Eckhouse et al.

Regarding claims 7 and 8, Eckhouse et al. teach using up to three pulses. The number of pulses determines the total fluence delivered to the tissue. However, the number of pulses has not been disclosed as yielding any specific benefits or unexpected results.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use any pulse parameters that provide the required radiation because Applicant has not disclosed that a specific number of pulses provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected multiple pulse parameter variants to perform equally well as they all provide the radiation to the skin as required.

Therefore, it would have been prima facie obvious to modify Chubb et al. in view of Eckhouse et al. to obtain the invention as specified in claims because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Chubb et al. in view of Eckhouse et al.

Regarding claims 12-15, 18, 19, 24, 31-35 67 the interval between exposures is not disclosed as having a specific benefit or producing any unexpected results. The range intervals disclosed is quite large, ranging from no interval to over 24 hours, with no cited benefit for any specific interval. Eckhouse et al. teaches the interval between the pulses and puise durations.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use any exposure interval that provide the required radiation because Applicant has not disclosed that a specific interval provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected any interval to perform equally well as long as they provide the radiation to the skin as required.

Therefore, it would have been prima facie obvious to modify Chubb et al. in view of Eckhouse et al. to obtain the invention as specified in claims because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Chubb et al. in view of Eckhouse et al.

It is also not clear how exposure to X-ray or UV radiation between the treatments (intervals of 24 hours) could be controlled as UV radiation is pervasive in our environment; i.e. sunlight, fluorescent lights, etc.

Regarding claims 16 and 17, Eckhouse et al. teaches the absorption of light in the melanin in tissue (Col. 21, line 35).

Regarding claim 79, it is inherent that radiation on tissue will be refracted and scattered, such actions being dependent on the radiation parameters.

Regarding claim 80, the location of the method has not impact on the steps of the method.

Claims 22, 23, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,017,360 to Chubb et al. in view of U.S. Patent 6,514,243 to Eckhouse et al. as applied to claims 1 and 29 above and further in view of U.S. Patent 6,171,302 to Talpalriu et al. Chubb et al. and Eckhouse et al. are discussed above, but do not teach marking radiated areas. Talpalriu et al. discloses a method for irradiating skin with a light beam and since the beam does not leave any visible mark on the skin, a marker using any marking fluid suitable for leaving a visible trace upon surface of the tissue (Col. 10, lines 30-33) is applied to show areas of exposure. The marking is located on the trailing end of the applicator, thus marking the tissue after irradiation. The mark is visible therefore it must contain pigment. Talpalriu et al. do not disclose marking every radiated point. The intent of Talpalriu et al. is clearly to define the areas that have been radiated by marking the area. Such marking is interpreted as defining the area within the marks making it functionally equivalent to marking individual points. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the outline marking as taught by Talpalriu et al. as an alternative to marking discrete points for determination of radiated areas in the method suggested by Chubb et al. in view of Eckhouse et al. to clearly mark the radiated areas as suggested by Talpalriu et al.

Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,017,360 to Chubb et al. in view of U.S. Patent 6,514,243 to Eckhouse et al. as applied to claim 1 above and further in view of U.S. Patent 6,676,655 to McDaniel. Chubb et al. and Eckhouse et al. are discussed above, but do not disclose the use of exogenous compounds, ultrasound or electromagnetic fields. McDaniel teaches the use of porphyrin as an excellent topical composition with superior optical properties for acting as a chromophore to enhance low-intensity light therapies (Col 22, line 33-37).

Regarding claim 27, McDaniel teaches that ultrasound may be used therapeutically to interact directly with the agent or the agent-tissue complex to produce the desired damaged target tissues (to be used alone or in combination with laser or non-laser light sources)(Col. 6, line 66 to Col. 7 line 3).

Regarding claim 28, McDaniel discloses low energy electromagnetic fields can be used alone or in combination with photomodulation (Col. 15, lines 55-60).

It would have been obvious to one skilled in the art to look to other skin radiation devices and methods to complement a methodology. The use external chromophores, ultrasound and electromagnetic fields as taught by McDaniel to enhance the efficacy of the radiation in the method of Chubb et al. in view of Eckhouse et al. as suggested by McDaniel.

Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,171,302 to Talpalriu et al. Talpalriu et al. discloses a method for irradiating skin with a light beam and since the beam does not leave any visible mark on the skin, a marker using any marking fluid suitable for leaving a visible trace upon surface of the tissue (Col. 10, lines 30-33) is applied to show areas of exposure. The marking is located on the trailing end of the applicator, thus marking the tissue after irradiation. The mark is visible therefore it must contain pigment. Talpalriu et al. do not disclose marking every radiated point, however it is considered obvious to do so to clearly indicate the areas that have been exposed to EMR. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use marking techniques as taught by Talpalriu et al.

Claims 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,017,360 to Chubb et al. Chubb et al. are discussed above, but do not teach application during exposure to radiation.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use any time interval, before during or after exposure to radiation because Applicant has not disclosed that such timing provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected all timings to perform equally well as they all provide the radiation to the skin as required.

Therefore, it would have been prima facie obvious to modify Chubb et al. to obtain the invention as specified in claims because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Chubb et al.

Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,171,302 to Talpalriu et al. as applied to claim 58 above and further in view of U.S. Patent 6,730,113 to Eckhardt et al. Talpalriu et al. are discussed above, but do not teach sensing a marked area. Eckhardt et al. disclose the use of a color-changing material, such as a photochromic or fluorescent ink or dye as a film on bandage to detect radiation level. The color-changing material may change color or emit light when exposed to UV light. Eckhardt et al. teach sensors to detect varying skins or a difference between skin and bandage using reflectance. Such a sensor is capable of detecting reflectance of the marker dye or film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the color-changing film and sensors to detect radiation of Eckhardt in the invention of Chubb et al./Eckhouse et al./Talpalriu et al. to monitor the radiation level to insure proper levels of radiation.

Claims 82 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,017,360 to Chubb et al. in view of U.S. Patent 6,514,243 to Eckhouse et al. in view of

U.S. Patent 6,171,302 to Talpalriu et al. as applied to claims 22 and 38 above and further in view of U.S. Patent 6,730,113 to Eckhardt et al. Chubb et al. Eckhouse et al. and Talpalriu et al. are discussed above, but do not teach sensing a marked area. Eckhardt et al. disclose the use of a color-changing material, such as a photochromic or fluorescent ink or dye as a film on bandage to detect radiation level. The color- changing material may change color or emit light when exposed to UV light. Eckhardt et al. teach sensors to detect varying skins or a difference between skin and bandage using reflectance. Such a sensor is capable of detecting reflectance of the marker dye or film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the color-changing film and sensors to detect radiation of Eckhardt in the invention of Chubb et al./Eckhouse et al./Talpalriu et al. to monitor the radiation level to insure proper levels of radiation.

Claims 90 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,171,302 to Talpalriu et al. in view of U.S. Patent 6,730,113 to Eckhardt et al. Talpalriu et al. are discussed above, but do not teach sensing a marked area. Eckhardt et al. disclose the use of a color-changing material, such as a photochromic or fluorescent ink or dye as a film on bandage to detect radiation level. The color- changing material may change color or emit light when exposed to UV light. Eckhardt et al. teach sensors to detect varying skins or a difference between skin and bandage using reflectance. Such a sensor is capable of detecting reflectance of the marker dye or film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the color-changing film and sensors to detect radiation of Eckhardt in the invention Talpalriu et al. to monitor the radiation level to insure proper levels of radiation.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Henry M. Johnson, III
Primary Examiner
Art Unit 3739